

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-24 (canceled)

25. A whole body stereotactic localization and immobilization system comprising:

~~a patient elongated support and frame including a fiducial pattern having at least two fiducials at least one of which has a trigonometric waveform; and a patient elongated frame having a longitudinal axis including at least two fiducials, two of said at least two fiducials positioned generally parallel with the longitudinal axis, said two fiducials each comprising a repetitive trigonometric waveform, the position of the first one of said two fiducials being longitudinally offset from the position of the second one of said two fiducials;~~  
means for temporarily immobilizing the patient's body in relation to the fiducials at least during imaging. a body immobilizing device maintaining the patient's body in fixed relationship to the fiducials at least during imaging.

26. The whole body stereotactic localization and immobilization system of Claim 25 wherein said trigonometric waveform first fiducial is a sine wave.

27. The whole body stereotactic localization and immobilization system of Claim 25 wherein said trigonometric waveform second fiducial is a cosine wave.

28. The whole body stereotactic localization and immobilization system of Claim 25 ~~wherein said fiducial pattern includes a continuous array of coupled fiducials.~~ additionally including a longitudinally slidable carriage.

29. The whole body stereotactic localization and immobilization system of Claim 25 wherein, ~~at least two~~ of said two fiducials have in trigonometric waveforms, one of said waveforms is being sinusoidal and the ~~other~~ second is cosinusoidal.

30. The whole body stereotactic localization and immobilization system of Claim 29 wherein the position of the sine and cosine fiducials are ~~mathematically linked~~ transversely spaced apart.

31. The whole body stereotactic localization and immobilization system of Claim 30 wherein the position of the sine and cosine fiducials are longitudinally offset and mathematically linked by a  $\pi/2$  relationship.

~~32.33.~~ The whole body stereotactic localization and immobilization system of Claim 30 wherein ~~one a fourth~~ of said at least two fiducials is a straight line parallel to the longitudinal axis of ~~the support~~ said frame and not intersecting said trigonometric waveform fiducials.

~~33.32.~~ The whole body stereotactic localization and immobilization system of Claim ~~32 25~~ wherein ~~another a third~~ of said at least two fiducials is a straight line non-parallel to said ~~first straight line~~ fiducial. longitudinal axis of said frame.

34. The whole body stereotactic localization and immobilization system of Claim 33 wherein ~~still another a fifth~~ of said at least two fiducials is a straight line.

35. The whole body stereotactic localization and immobilization system of Claim 34 wherein said ~~one and another~~ fourth and fifth of said at least two fiducials are parallel and positioned relative to said patient elongated ~~support frame~~ so as to lie adjacent and generally parallel to the left and right sides of the patient.

36. The whole body stereotactic localization and immobilization system of Claim 35 wherein said ~~non-parallel third~~ fiducial does not intersect said ~~one and another~~ fourth and fifth parallel straight line fiducials within the confines of said patient elongated ~~support frame~~.

37. The whole body stereotactic localization and immobilization system of Claim 36 wherein said ~~non-parallel third~~ fiducial does not intersect the two trigonometric waveform fiducials within the confines of ~~the said~~ patient elongated ~~support frame~~.

38. The whole body stereotactic localization and immobilization system of Claim 37 wherein ~~yet another a sixth~~ of said at least two fiducials is a straight line parallel to the longitudinal axis of said frame and adjacent one or the other of said left and right straight line fiducials so as to effect an error protection.

39. The whole body stereotactic localization and immobilization system of Claim 38 wherein said first and second trigonometric waveform fiducials having varying amplitude.

~~40. The whole body stereotactic localization and immobilization system of Claim 29 wherein said fiducial pattern includes a continuous array of coupled fiducials.~~

41. The whole body stereotactic localization and immobilization system of Claim 25 wherein said frame need not be orthogonally aligned within a scanning device in order to permit precise stereotactic localization in images taken by the scanning device.

42. The whole body stereotactic localization and immobilization system of Claim 25 additionally comprising quality assurance ~~markers~~ fiducials placed at predetermined positions along an axis of said frame.

43. The whole body stereotactic localization and immobilization system of Claim 25 wherein said frame includes an arc carriage.

44. The whole body stereotactic localization and immobilization system of Claim 43 wherein said arc carriage includes means for holding surgical probes, electrodes, or beam localization and delivery systems.

45. A whole body stereotactic localization and immobilization system comprising:  
a patient elongated ~~support and frame~~ including an imaging resolver having at least two fiducials ~~one a first of which is a straight line that is not parallel to the axis of the frame and another~~ each of which has a repetitive trigonometric waveform, one of said repetitive waveform fiducials offset from a second repetitive waveform fiducial; and  
means for temporarily immobilizing the patient's body in relation to the imaging resolver.

46. The whole body stereotactic localization and immobilization system of Claim 45 additionally including means for mathematically calculating stereotactic coordinates.

~~47. The whole body stereotactic localization and immobilization system of Claim 45 wherein said calculation means includes means for optimizing the calculation of the stereotactic coordinates.~~

~~48. The whole body stereotactic localization and immobilization system of Claim 45 wherein the axis of the fiducials having a trigonometric wave form is parallel to the fiducial having a straight line form.~~ /

49. A method for stereotactic localization of a portion of a human body comprising:

- placing the patient's human body including a lesion on a ~~support and~~ frame;
- temporarily immobilizing the patient's body during imaging by a scanning device such as computed tomography or magnetic resonance imaging;
- providing a fiducial pattern on said frame for creating markers on the patient image to create a reference system;
- configuring the fiducial pattern so as to include at least two fiducials, each one of said fiducials having a straight line form that is non-parallel to the axis of the frames and a second fiducial having a repetitive trigonometric waveform one of said repetitive waveform fiducials offset from a second repetitive waveform fiducials;
- providing a computer system for displaying said images, including said markers, and a software program for utilizing said fiducial markers for accurate stereotactic positioning information;
- creating a radiation therapy plan for treatment of a lesion the position of which is determined based on the images and computer program;
- immobilizing the patient's body in a radiation therapy delivery device; and
- delivering radiation therapy to the applicable portion of the patient's body so as to treat the lesion.